

CLAIMS

What is claimed is:

1. A method comprising:
 - 2 capturing an image;
 - 3 determining if the image has changed, and if the image has changed,
 - 4 sending the image to a server; and
 - 5 if the image has not changed with a period, sending a heartbeat to indicate
 - 6 continued functionality.
1. 2. The method of claim 1, wherein determining if the image has
2 changed comprises detecting motion in the image.
1. 3. The method of claim 1, wherein sending a heartbeat is smaller, and
2 thus uses less bandwidth than sending an image.
1. 4. The method of claim 3, wherein the heartbeat comprises a
2 compressed version of the unchanged image, including a time stamp.
1. 5. The method of claim 3, wherein the heartbeat comprises a time
2 stamp.
1. 6. The method of claim 3, wherein the heartbeat is a single bit.
1. 7. An apparatus comprising:
 - 2 a camera for obtaining images;
 - 3 an interface to send a new image if the new image is different from the old
 - 4 image; and
 - 5 a heartbeat logic to send a heartbeat signal, if the new image has not been
 - 6 different from the old image in a period of time.

1 8. The apparatus of claim 7, further comprising:
2 a motion detector to compare the new image with the old image, and
3 determine if the new image is different from the old image.

1 9. The apparatus of claim 7, wherein the camera periodically obtains a
2 new image.

1 10. The apparatus of claim 7, further comprising a timer, the timer
2 reset every time the interface send a new image, and the timer indicating to the
3 heartbeat logic to send the heartbeat signal, if the timer reaches a value.

1 11. The apparatus of claim 1, wherein sending a heartbeat is smaller,
2 and thus uses less bandwidth than sending an image.

1 12. The apparatus of claim 11, wherein the heartbeat comprises a
2 compressed version of the unchanged image, including a time stamp.

1 13. The apparatus of claim 11, wherein the heartbeat comprises a time
2 stamp.

1 14. A method of obtaining images and a status of a camera, the method
2 comprising:

3 sending a new image, if the new image is different from an old image; and
4 sending a heartbeat, if the new image is not different from the old image.

1 15. The method of claim 14, wherein the new image is send
2 periodically at a first rate, and the heartbeat is sent periodically at a second rate.

1 16. The method of claim 15, wherein the heartbeat is sent only if a

801 > 2 series of new images were the same as the old images

1 17. The method of claim 14, further comprising:
2 using a first timer to periodically send the new images; and
3 using a second timer, to send the heartbeat, if no new images were sent
4 within a period.

801 > 1 18. The method of claim 17, further comprising resetting the second
2 timer when the new image is sent.

1 19. A system of providing images to a user, the system comprising:
2 a plurality of cameras for periodically obtaining images;
3 a camera control system to collect images from the plurality of cameras,
4 the camera control system including:
5 a comparison logic to determine whether a new image
6 obtained by a camera is different from an old image obtained by
7 the camera;
8 a heartbeat logic to generate a heartbeat signal, if the new
9 image has not been different from the old image in a period of time;
10 and
11 an interface to send the new images that are different from
12 old images through a network;
13 a server to receive the images from the camera control system and server
14 them to the user.

1 20. The system of claim 19, wherein the interface further sends a
2 heartbeat for those cameras that have not had an image sent in a previous set of
3 cycles.

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